IN THE CLAIMS

The claims have been amended as follows:

1. (Original) An ice detector for detecting ice accretion on a surface of a structure subject to icing, said ice detector comprising a sensing element protruding into the airflow and supported relatively to a surface of said structure by a strut upon which it is mounted, characterized in that said sensing element has an evolutionary profile, with a cross-section varying along the longitudinal axis of said sensing element, adapted to enlarge the measurement range of icing conditions, in particular in terms of droplet size spectrum and measurement length.

2. (Original) The ice detector of claim 1 further characterized in that said sensing element has a circular or elliptic cross-section.

3. (Original) The ice detector of claim 1 further characterized in that said sensing element has a polygonal cross-section.

4. (Currently Amended) The ice detector of claim 2 or claim 3 further characterized in that the characteristic dimension of the sensing element cross-section decreases continuously as the distance from said structure subject to icing increases.

5. (Currently Amended) The ice detector of claim 2~~claims 2, 3 or 4~~ further characterized in that said sensing element has a substantially conical shape.

6. (Currently Amended) The ice detector of claim 2~~ or 3~~ further characterized in that the characteristic dimension of the sensing element cross-section decreases discontinuously as the distance from said structure subject to icing increases.

7. (Currently Amended) The ice detector of claim 2~~, 3 or 6~~ further characterized in that said sensing element is constituted by successive coaxial cylinders adapted to identify the icing conditions encountered, particularly in terms of droplet size and concentration.

8. (Currently Amended) The ice detector of ~~any of the preceding claims~~claim 1 further characterized in that said sensing element is sloped, in the direction of the airflow, from the orthogonal axis of the surface upon which said ice detector is mounted.

9. (Original) An ice detector for detecting ice accretion on a surface of a structure subject to icing, said ice detector comprising a sensing element protruding into the airflow and supported relatively to a surface of said structure by a strut upon which it is mounted, characterized in that said strut comprises a deflector installed in front of said sensing element and adapted to increase the quantity of water droplets that accretes on said sensing element by locally deflecting the streamlines towards this one.

10. (Original) The ice detector of claim 9, further characterized in that said deflector is a flat surface on the strut sloped from airflow direction toward said sensing element.

11. (Original) The ice detector of claim 9, further characterized in that said deflector is a rounded concave surface on the strut sloped from airflow direction toward said sensing element.

12. (Original) An ice detector for detecting ice accretion on a surface of a structure subject to icing, said ice detector comprising a sensing element protruding into the airflow and supported relatively to a surface of said structure by a strut upon which it is mounted, characterized in that said ice detector provides a signal indicating the severity of the icing conditions determined by the speed at which ice accretes on said sensing element trough the analysis of the slope of the curve representing the decline of the sensing element oscillation frequency over time.

13. (Original) An ice detector for detecting ice accretion on a surface of a structure subject to icing and providing an alarm signal when a substantial ice accretion is detected, said ice detector comprising a sensing element protruding into the airflow and supported relatively to

a surface of said structure by a strut upon which it is mounted, said sensing element and said strut being de-iced after the detection of a substantial ice accretion, characterized in that the de-icing of said sensing element is maintained until said sensing element is free of ice whereas the de-icing of said strut is maintained during the whole duration of said alarm signal.

14. (Original) The ice detector of claim 13 further characterized in that a first power supply is dedicated specifically to the de-icing of said strut and a second power supply is dedicated specifically to the de-icing of said sensing element.

15. (Original) The ice detector of claim 13 further characterized in that a power supply is dedicated to the de-icing of both said strut and sensing element, a switch allowing heating of either both said strut and sensing element or only said strut.